course without flinching! how all-important that the conviction should be pressed home to their minds—that it is upon their own self-exertion and self-improvement their future excellence must depend! A man cannot make a more fatal mistake than in leaning upon others. Let him rather choose the more dignified course of trusting to himself.

The records of history teach us how incompetent are the first masters of the age to convey instruction to minds not sufficiently in accord with theirs to turn the instruction, so sought to be conveyed, to good account. It would be not more vain to sow on the sea-shore and expect to raise a crop of wheat, than to look for good results from the task thus imposed. The seed may be sown, the fertilizing rains and dews may descend, but there must be a spontaneous action of the soil, in combination with these agents, before the plant can spring up into life. As in natural, so in intellectual culture.

Had the master all wisdom and patience—could he unite in his own person all the talents of the most talented architects, without his pupils' co-operation, he could not transfuse a particle of his skill, wisdom, or patience, into their minds. Further, let them hear Locke:—"Nobody is made anything by hearing of rules, or laying them up in his memory: practice must settle the habit of doing."

C. J. N.

NOTES ON GAS.

SOME new mode of economizing and cheapening the manufacture of gas is ever occurring in the experience of the manufacturers, and to their advantage, at least, if not to that of the public. The superintendent of the Rugby Gas-works is at present engaged in carrying out a series of experiments which seem to be of some importance in this respect. The object in view is the purification of the gas from sulphuretted hydrogen, and this he appears to find may be effected without a continued waste or expenditure of quick lime, or any other material, by merely substituting a mixture of lime and hot solution of green vitriol absorbed by sawdust, in the proportion of about 112 lbs. of the vitriol, or sulphate of iron, to 40 lbs. of the lime, finely sifted. Now it has been found not only that this mixture does purify the gas, but that after it has been used up in so doing, a little exposure to the air reconverts it, changing its colour from black to brown, into a state requiring only a little moisture to enable it to do the same duty over again, even more effectually than before, and we doubt not as often and as long as may be desired. The *rationale* of the process, in fact, seems just to be this: the sulphuretted hydrogen absorbed from the gas will convert the quick lime into hydrosulphate of lime, which will interchange acids with the oxysulphate of iron, and thus form sulphuret of iron, water, and sulphate of lime. Exposure to air will, by the addition of oxygen, enable the sulphur to escape as sulphuretted hydrogen, while the iron becomes oxidized; but here comes the only doubtful part of the process:—oxide of iron might enable the mixture to do a second time, by itself absorbing more sulphuretted hydrogen, just as the oxide of lime did in the first instance, but the latter is no longer a serviceable oxide of lime—it is a neutral and fixed sulphate. Of what further use is it then in the mixture at all? We will venture to suggest that it is of no further use, unless it be to separate the particles of iron oxide, as the mere sawdust does, and thus the more fully to expose it to the sulphuretted hydrogen. In short, we would recommend the substitution of mere oxide of iron itself, prepared, it might be, by rotting a precipitated sulphuret into sulphuretted hydrogen and iron oxide. Such an oxide, mixed with the moistened sawdust, would absorb the sulphuretted hydrogen on the purifying sieves, *and liberate it again* by rotting on exposure to air as before, leaving the newly rotted base or oxide as ready to absorb another dose of sulphuretted hydrogen and form a nascent sulphuret of iron as before, to be as readily rotted again as ever. Thus the only use of the lime was at first to assist in preparing the sulphate of iron into oxide and sulphuret by the withdrawal of its acid, and thereafter it probably remains as a mere clog to future purification, unless, as said, it aid the sawdust as a separator, which *plaster of Paris* is not very likely to do. At all events we would recommend gas engineers to test this view of the process. "In an era when the cry for cheap gas resounds from one end of the kingdom to the other," says the *Coventry Herald*, in allusion to Mr. Phillips's process, "and when gas companies are exerting themselves to the utmost to meet the wishes of their customers, this discovery may become of great importance, and be received gladly by those interested in the manufacture of coal gas. ——It is well known at Northampton that in consequence of the last reduction in price obtained from the gas company there, the company's own rental has greatly increased, yet strange to say, the hint has not been taken, and the company have allowed "the gas movement" to occupy a strong position in Northampton, where a numerous meeting of consumers and others was held on Monday, in week before last, at and since which nearly 300 consumers have pledged themselves to take gas, for seven years, from any new company that will engage to supply it at 5s. a 1,000 cubic feet, with a reduction within the term should circumstances prove such reduction to be practicable." The mayor is at the head of the movement, but at the meeting, he advocated "the advantage to a town from a gas company being in the hands of the borough authorities, and instanced Manchester, where gas was now supplied at 3s. 9d. per 1,000 feet, and the profits, which were large, appropriated in payment of the borough expenses." A deputation had waited without success on the company, "to represent the bad quality of the gas, the deficient supply, the oppressiveness of the monopoly of the fittings, and the exorbitant price charged for gas." The local *Herald*, in supporting the movement, and disclaiming all ill feeling to the existing company, expresses its firm belief that the latter would be as much benefited by the required reduction as their customers. Though resisting the movement till they have thus lent a hand in maturing it, the company have now thought proper to announce a tardy and partial reduction to 6s. 3d. and the adoption of the system of renting meters as a promotive to future consumption in private dwellings.——The Rotherham Gas-light and Coke Company appear to be awakening to the advantage of lowering prices (at least to some extent) without absolute compulsion. Since their last reduction "the company are extending their works, and appear to be in a very prosperous state." They have just been striking a dividend of 10 per cent.—the maximum allowed by the Gas Act—besides carrying an odd trifle of 300*l.* to their reserve fund, and all out of a total receipt of about 1,600*l.* only. They are consequently in good humour, and have voluntarily reduced the price of their article 5d. per 1,000 feet.——The price of gas at Rochdale, where, as the local Gas Commissioners state, "the profits from the gas pay all the town improvements, with 200*l.* over," has been reduced from 6s. to 5s. a thousand feet for small consumers; large pay only 4s. 6d.——The *Carlisle Journal*, in speaking of "the advantages which the citizens are likely to derive from the transfer of the gas works into the hands of the corporation," says, "It will be seen that, after paying a dividend of 9 per cent. on the original paid-up capital, a sum of upwards of 1,200*l.* has been laid out in extensions of the works, new mains, lamps, apparatus, and buildings, from which additional returns will be obtained hereafter. But little outlay will be required for extensions for many years to come; so that a large surplus—from 600*l.* to 800*l.* at least—may be calculated upon to be carried to the borough fund annually for the improvement and general benefit of the town. This is certainly a very gratifying prospect. * * * * Since the trustees took possession, although they have had to build and provide an entirely new 'plant' upon a very extensive scale, they have reduced the price of gas to private consumers to 5s. per 1,000 cubic feet; they have greatly increased the number of public lamps; and they have vastly extended the hours of lighting,—at the same time limiting the lighting rate to sixpence in the pound."——The Consumers' Gas Company, Dublin, has declared a dividend equal to 7½ per cent. on the past half-year alone.

PRESERVATION OF ANCIENT MONUMENTS.

ST. BARTHOLOMEW'S, SMITHFIELD.

SOME time since you did me the favour to insert in your columns a recommendation that, prior to any interesting building being demolished, drawings of the same should be made by a qualified architect, and deposited in the public archives. I perceive, in your last number, that Mr. Griffith complains that remains of St. Bartholomew's Church, Smithfield, are being swept away, and that no record of them will be left: this is barbarous. Had the plan been adopted of preserving drawings of all fine buildings necessarily doomed to destruction, what a mine of art might we not possess, which is now totally lost to us! The magnificent portico which Inigo Jones attached to old St. Paul's, the sight of which induced so many thousand persons to subscribe towards the full repair of that building, has disappeared, without the possibility of our retracing its features. We know that Sir Christopher Wren regretted the necessity of taking down that portico, and remarked upon the difficulty of the task, owing to the solid manner of its construction, it being built after the true Roman fashion. This only sharpens our regret at the loss we have sustained. Again, Sir William Chambers deplored the removal of the façade which Inigo Jones had built to old Somerset House, and with a view to recal to mind this fine structure, determined to make his Strand front to the new building as much like that of Inigo Jones as he possibly could do. We cannot but commend the enthusiasm of Sir William Chambers, whilst we feel how little we are reminded, in his work, of the great disciple of Palladio; but with this little we must rest contented.

I would most respectfully urge that the Royal Academy should take in hand the good work of preserving memorials of all really fine buildings which must in future be sacrificed either to the mania of change or to the principle of *improvement*. The Royal Academicians are, owing to their position and qualifications, the legitimate guardians of the public taste; and to that body, I believe, the public would cheerfully intrust the important and patriotic duty of preserving and handing down to posterity those architectural embellishments which were once the pride of our land.

A. W. HAKEWILL.

Our readers will scarcely believe us when we say that, "the tomb and the remains of Alfred the Great" were to be offered for sale by auction, on Thursday last, by order of the Winchester county magistrates! The *Hampshire Independent* with just indignation says:—"If future generations do not affix the burning brand of shame on this our own generation, which permitted such a disgraceful act to be perpetrated, retribution will be proved to be a fallacy, and indignation to have discharged its shafts wide of the mark which it ought to reach. This deliberate act of the county authorities — this act of men on whom education seems to have been lavished in vain—this insult to the feelings of every Englishman who has ever cherished or nurtured as a household theme the name, the deeds, the thoughts, and the words of Alfred, as the personification of all that is great and good in a monarch, of all that can dignify, adorn, and elevate humanity—is to be consummated, and the mouldering dust of Britain's greatest legist is to be disposed of on Thursday next."

VOTE ON THE WINDOW-TAX.—Lord Duncan's motion—that it is expedient to abolish the window-tax—came to the vote on Tuesday last in the Commons, when we regret to say that it was lost by a majority of three—80 to 77—a result the more provoking, since there were exactly the number of yeas shut out that would have turned the majority to the right side. As it was, however, the probably somewhat unexpected narrowness of the majority was received with loud cheers. And well it might be, considering that the Ministers, with all their influence, could only secure a majority of three against the immediate abolition of this abominable and now certainly doomed tax.

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